

IN THE SPECIFICATION:

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~striketrough~~.

Please REPLACE paragraph [0014] with the following paragraph:

[0014] These and/or other aspects and advantages of the invention will become apparent and more readily appreciated from the following description of the preferred embodiments, taken in conjunction with the accompanying drawings, of which:

FIG. 1 is a flowchart illustrating a method of controlling a power supply in an electronic machine using a host, according to an embodiment of the present invention;

FIG. 2 is a block diagram of an apparatus that performs the method of FIG. 1, according to ~~the~~an embodiment of the present invention; and

FIG. 3 is a circuit diagram of a primary side of a power supply according to the embodiment of the present invention, which includes an alternating current (AC) power connection unit, a power rectification unit, and a power switching unit that are included in the apparatus of FIG. 2.

Please REPLACE paragraph [0021] with the following paragraph:

[0021] FIG. 2 is a block diagram of an apparatus that performs the method of FIG. 1, according to ~~the~~an embodiment of the present invention. The apparatus of FIG. 2 includes an AC power connection unit 100, a power rectification unit 120, a power supply control unit 140, and a power switching unit 160.

Please REPLACE paragraph [0024] with the following paragraph:

[0024] Referring to ~~FIG.~~FIGS. 2 and 3, the AC power connection unit 100, which includes first and second nodes node 1 and node 2 and a resistor R1, receives AC power from an AC power supply source 280 via node 1 and transmits the AC power via the resistor R1 to node 2, which is connected to the power switching unit 160. Node 1 is located on a circuit line that receives the AC power, and node 2 is located on a circuit line connected to the power switching unit 160.

Please REPLACE paragraph [0026] with the following paragraph:

[0026] Referring to FIG. 3, the power rectification unit 120 receives AC power from the AC power supply source 280 and rectifies the AC power by transmitting forward current and blocking backward current using a diode D1. The power rectification unit 120 also removes ripple current (i.e., smoothes) from the rectified power using an electrolytic capacitor C1 and outputs smoothed and rectified power.

Please REPLACE paragraph [0027] with the following paragraph:

[0027] In contrast to the related art, the discharge line of the electrolytic capacitor C1 in the power rectification unit 120 is open. Accordingly, even when the supply of power supply from the AC power supply source 280 is turned off, charges stored in the electrolytic capacitor C1 to achieve power smoothing are not discharged. In the related art, ~~the an electrolytic capacitor of a power rectification unit C1~~ is connected to ~~the a power switching unit 160~~ to supply power to and drive the power switching unit ~~160~~. ~~However,~~ But in the present ~~invention~~ embodiment, the electrolytic capacitor C1 is not connected to the power switching unit 160, so charges stored in the electrolytic capacitor C1 are not discharged even when the supply of power from the AC power supply source 280 supply is turned off or switched on. Therefore, incorrect operation of the electronic machine due to discharge of the conventional electrolytic capacitor ~~C1~~ is prevented.

Please REPLACE paragraph [0028] with the following paragraph:

[0028] To determine whether provision of power to the electronic machine 260 has been requested (FIG. 1, at operation 12), the power supply control unit 140 controls the operation of the power switching unit 160. To be more specific, the power supply control unit 140 receives a power supply control request signal via an input terminal IN2 from a host ~~(not shown)~~ 200 connected to the electronic machine 260, and outputs a signal for controlling the power switching unit 160 connected to the primary side of the power supply 270 of the electronic machine 260.

Please REPLACE paragraph [0029] with the following paragraph:

[0029] In a case where a power supply 270 of the electronic machine 260 (e.g., a printer ~~(electronic machine)~~) connected to a host 200 (e.g., a computer ~~(host)~~) is controlled, if the power supply control unit 140 receives print data from the computer, the power supply control unit 140 senses-determines that power is to be supplied to the printer. Accordingly, the power supply control unit 140 transmits a signal for driving the power switching unit 160 to the power switching unit 160. If the power supply control unit 140 does not receive any print data from the computer within a predetermined period of time or if the state of the computer changes from an on state to an off state, the power supply control unit 140 senses-determines that power provision to the printer is to be turned off. Accordingly, the power supply control unit 140 transmits a signal ~~for turning to turn~~ to turn off the power to operate the PWM-IC 165 ~~power switching unit 160~~ to the power switching unit 160.

Please REPLACE paragraph [0030] with the following paragraph:

[0030] The power supply control unit 140 ~~drives-controls~~ the power switching unit 160 using power received from the host. Power (e.g., a voltage of +5V) output from the host 200 via a voltage bus line ~~(not shown)~~ 220 is converted into a logic voltage (e.g., +3.3V or +2.5V) by a DC/DC converter ~~(not shown)~~ 210, and the logic voltage is applied to the power supply control unit 140. Hence, the power supply control unit 140 can control the power switching unit 160 regardless of whether power is supplied from the AC power supply source 280 ~~of the electronic machine~~.

Please REPLACE paragraph [0031] with the following paragraph:

[0031] To drive the power switching unit 160 (FIG. 1, at operation 14), the power switching unit 160 is ~~driven-powered~~ by AC power and PWM-IC 165 is switched on or off to control the provision of DC power to the electronic machine 260. To be more specific, from the power supply control unit 140, the power switching unit 160 receives a control signal associated with the ~~power-supply of power to~~ the electronic machine 260, ~~from the power supply control unit 140~~, is driven by the AC power received from the AC power connection unit 100, and outputs the result of a decision regarding provision or non-provision of DC power rectified by the power rectification unit 120 via an output port OUT2.

Please REPLACE paragraph [0032] with the following paragraph:

[0032] Referring to FIG. 3, if the power switching unit 160 receives non-rectified AC power, but does not receive the control signal ~~for driving the power switching unit 160~~ from the power supply control unit 140 to drive the PWM-IC 165, no operating power is applied to the PWM-IC 165 in the power switching unit 160. Hence, the rectified DC power is not supplied to the electronic machine 260.

Please REPLACE paragraph [0033] with the following paragraph:

[0033] ~~If~~ For example, if the computer transmits print data to the printer, and, accordingly, the power supply control unit 140 outputs the control or driving signal to the power switching unit 160, a photo transistor of a photo coupler PC1 in the power switching unit 160 operates to render the base of a PNP transistor Q1 in a low state. Because of the characteristics of the PNP transistor Q1, its collector and its emitter conduct such that the AC power received from the AC power connection unit 100 is used as operating power of the PWM-IC 165. Due to the operation of the PWM-IC 165, a field effect transistor (FET) is switched on to supply the DC power of the primary side of the power supply to the secondary side thereof. Hence, the printer is finally supplied with logic power (e.g., +5V3.3V) and drive power (e.g., +30V).

Please REPLACE paragraph [0034] with the following paragraph:

[0034] Also, instead of the control signal received from the power supply control unit 140, if a user inputs a switching signal representing power provision by pressing a selection switch S/W for power provision, the collector and the emitter of the PNP transistor Q1 conduct such that DC power is supplied to the printer by the operation of the PWM-IC 165.

Please REPLACE paragraph [0035] with the following paragraph:

[0035] On the other hand, if no print data are transmitted from the computer to the printer within a predetermined period of time after the printing operation of the printer is concluded, or if the power of the computer is turned off, the power switching unit 160 receives ~~the a~~ control signal from the power supply control unit 140 to stop~~for stopping~~ the operation of the power switching unit 160 ~~from the power supply control unit 140~~. In response to the received control signal, a photo coupler PC2 of the power switching unit 160 operates so that power for operating the PWM-IC 165 bypasses the PWM-IC 165 and is transmitted to a PWM enable terminal. Because the PWM-IC 165 does not receive power to operate, the FET is switched off so that the DC power is not transmitted to the secondary side of the power supply. Consequently, the DC power is not supplied to the printer.

Please REPLACE paragraph [0036] with the following paragraph:

[0036] Also, instead of the control signal being received from the power supply control unit 140, if a user turns off the power by pressing the selection switch S/W, the photo coupler PC2 operates such that DC power is not supplied to the printer.

Please REPLACE paragraph [0037] with the following paragraph:

[0037] In the related art, ~~the a~~ PWM-IC 165 is driven by rectified and smoothed DC power. ~~However,~~ But as shown in FIGS. 2 and 3, the PWM-IC 165 ~~in the present invention~~ is driven by AC power. Accordingly, even when the power switching unit 160 is driven by transmitting an electronic machine control signal from a host 200 to the electronic machine 260 that is not being supplied with power (e.g., when the host outputs print data to the printer) or by a user by pressing the selection switch S/W, incorrect operation of the electronic machine is prevented because the discharge line of the electrolytic capacitor has no discharge path.

Please REPLACE paragraph [0038] with the following paragraph:

[0038] In the method and apparatus according to embodiments of the present invention for controlling a power supply in an electronic machine using a host, even when a power switching unit is not supplied with power immediately after interruption of power provision from an AC power supply source, charges stored in an electrolytic capacitor are not discharged, so that incorrect operation of the electronic machine is prevented.

Please REPLACE paragraph [0039] with the following paragraph:

[0039] Although ~~an embodiment~~ embodiments of the present invention ~~has~~ have been shown and described, it will be appreciated by those skilled in the art that changes may be made in ~~this~~ these embodiments ~~embodiment~~ without departing from the principles and spirit of the invention, the scope of which is defined in the claims and their equivalents.